

# **Promoting Clean Jobs and Neighborhood Change: An Evaluation of the First Collaborative Environmental Justice and Cleaner Production Conference**

**College of the Holy Cross  
Worcester, Massachusetts**

**September 18, 2004**

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## **DISCLAIMER**

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## **BACKGROUND**

Environmental Justice (EJ) populations, or minority and low-income neighborhoods, have historically been disproportionately impacted by the harmful effects of hazardous materials on both human health and the environment, particularly since generations of industrial facilities have developed in urban areas where many EJ populations now reside. Modern industrial processes rely on a wide range of chemicals that, if improperly handled or released, can be harmful to human health and the environment.

The best way to prevent the harmful impacts of these hazardous materials is to reduce their use at the source through cleaner production. Cleaner production refers to a manufacturing process or approach to manufacturing production that is based on toxics use reduction and pollution prevention and strives to incorporate waste reduction, non-polluting production, energy efficiency, safe and healthy work environments, and environmentally sound products and packaging. That is, cleaner production presents an alternative approach that can help facilities, particularly those located in or near EJ populations, to look at their operations and reduce or eliminate their reliance on toxic chemicals.

While EJ populations may be aware of the potential harm posed by the use of toxic chemicals, it does not seem they fully understand the environmental, health and safety value of cleaner production approaches and recognize that such approaches promote sustainability in their communities.

The Massachusetts Office of Technical Assistance (OTA) within the Executive Office of Environmental Affairs has significant experience working with the manufacturing community particularly in the area of cleaner production. The OTA therefore sought to develop a conference using its vast knowledge and experience in cleaner production – in green chemistry, pollution prevention, toxics use reduction, and clean technology – to help EJ populations understand the value of locating cleaner production, sustainable businesses in their communities.

## **INTRODUCTION**

On September 18, 2004, the conference, “Promoting Clean Jobs and Neighborhood Change: Building Economic and Environmental Justice,” sponsored by the OTA in partnership with the Executive Office of Environmental Affairs Environmental Justice Program (EJP), was held in Worcester, MA.

This conference broke new ground as the first conference to establish a connection between cleaner production practices and community revitalization. Numerous conferences have been organized across the country to promote cleaner production approaches – including toxics use reduction, pollution prevention and green manufacturing. Conferences to organize Environmental Justice (EJ) communities – identifying issues they face and ways to address these issues – are also held nationally. But this was the first conference to combine these two areas.

Traditionally, cleaner production practices and EJ populations have been considered groups at odds with one another. Redevelopment in EJ communities rarely engages the potential for improved manufacturing facilities. The goals of the conference were therefore to:

- Inform EJ populations of the wealth of green manufacturing options and opportunities that are available to them. They would be provided with concrete examples of facilities that have already implemented cleaner production approaches.
- Discuss community efforts, strategies and tools that EJ populations can use to attract cleaner manufacturing and clean-up existing facilities.

- Provide cleaner production industry with the opportunity to interact more closely with EJ populations, so they can begin to understand that the bottom line for EJ populations is to live in healthy, economically and environmentally sustainable communities.
- Begin the dialog between industry and EJ populations so they can become better neighbors and work together to improve their communities.

It was hoped that this conference would lead to:

- EJ populations beginning to view cleaner production approaches as a means to enhance their neighborhoods and make them more healthy, livable and sustainable.
- EJ populations understanding cleaner production approaches so that they would be more amenable to, and perhaps even seek out, clean manufacturing operations for their communities.
- Industries feeling compelled to find ways to better communicate the good, clean practices they have already instituted.
- Serving as a national model that would begin to establish continued dialog between EJ populations and cleaner production practices.

#### Planning:

##### *Location:*

Worcester was chosen for the conference, as it is central to MA residents. Free buses were provided from 6 central locations.

##### *Personnel:*

- To ensure that appropriate stakeholders were included in all aspects of the conference planning, an organizing committee composed of representatives from environmental justice and community groups, including public health organizations and other national non-profits, academia, and industry, was established. This group met monthly with the EOEA team to develop the conference.
- Staff from the OTA and EJP followed up on all the decisions made by the conference committee. Essentially, they guided the conference from conception through implementation.
- 5 interns from local and national graduate universities helped to develop the conference during the summer. Their input was largely in outreach and in the development of the session workshops.
- Conference speakers and workshop session chairs and speakers were sought from organizations and companies with which OTA has already worked and developed relevant case studies.
- Exhibitors.

##### *Conference Attendees:*

Phone calls, e-mails, websites, and direct mailings from the organizing committee were used to publicize the conference to appropriate industry, academia and EJ and community group contacts. An audience of approximately 150 was sought: 75% representing EJ and community groups, including public health organizations and other national non-profits; 15% representing other national stakeholders such as financial institutions, development organizations, and governmental agencies including environmental and health officials; 5% representing industry; and, 5% from academia.

##### *Workshop Sessions:*

There were four afternoon workshop sessions of two hours. These sessions were:

- Attracting Green Businesses Using Your Local Government
- Where's the Money? Grants, Economic Development Packages, CRA & Tax Breaks
- Which Green Technology is Right for Me? Effectively Advocate It's Use In Your Neighborhood
- Developing Partnerships with Business

(See Attachment A for a copy of the day's agenda including speaker details for the workshop sessions)

##### *Technology Exhibits:*

Technology exhibits presented at the conference were:

- EPA and EOE table
- Cummins Metropower – Heavy-Duty On-Highway Emissions Technology
- Columbia Manufacturing – Powder Coating
- STAR training center at Bay Path Regional Vocational Technical High School – Spray technique analysis and research (for spray painting waste and emission reduction)
- Sprague Energy
- Investar Redevelopment
- UMass Amherst – CO2 technologies
- UMass Lowell – color injected plastics
- Crest Foam – CO2 process
- Steel Art – water jet cutting metals
- Fit to Print – UV curable inks

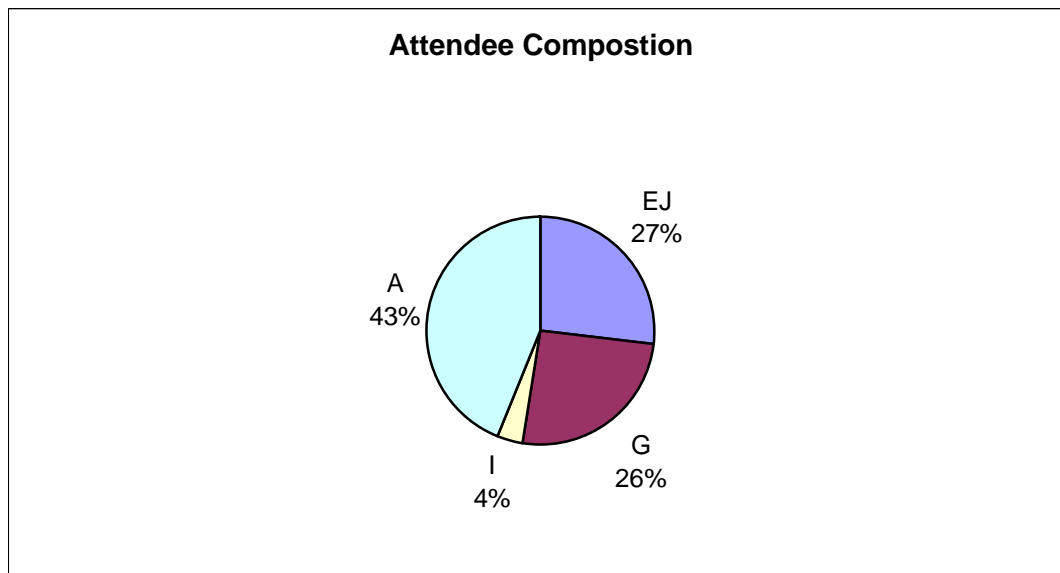
## **EVALUATION METHODOLOGY**

As this conference was the first of its kind in combining cleaner production practices and community revitalization, the OTA and EJP felt it important to evaluate the conference, summarizing recommendations and suggestions for future actions. This paper is the result.

In order to evaluate the “success” of the conference, evaluation forms were provided to all attendees and presenters. The evaluation forms can be found in Attachment B and C respectively. Of 82 attendees, 33 filled out the attendee evaluation form. Eight of the 15 presenters returned their evaluation forms to us. The evaluations are therefore based on 40% participation from attendees and 53% participation from presenters. Information was also gathered from the registration forms.

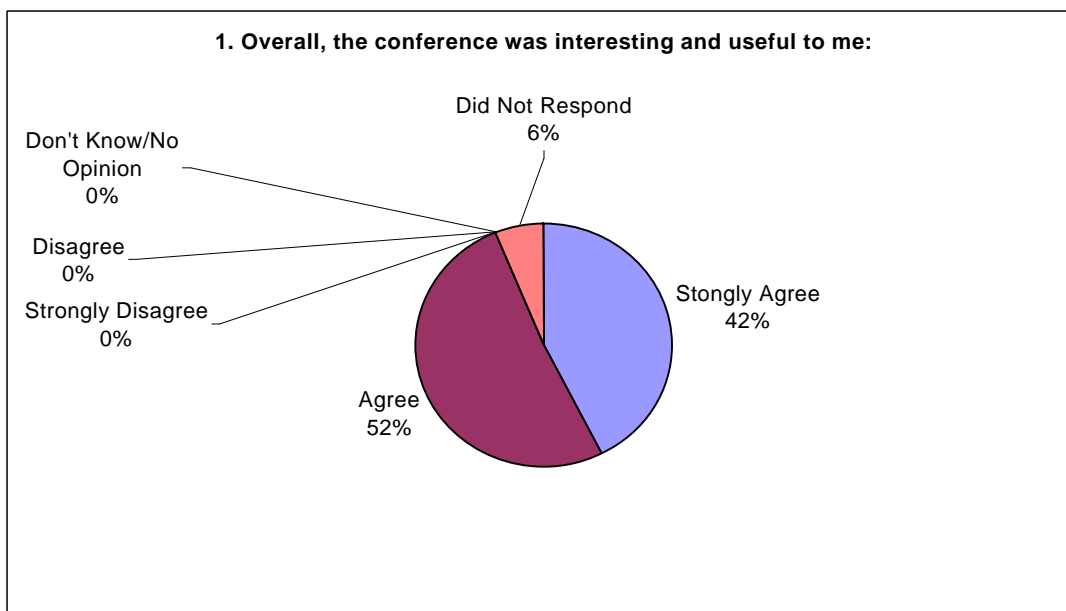
## **DATA FROM REGISTRATION FORMS**

This graph represents the conference attendees according to four categories: Environmental Justice and community groups, including public health organizations and other national non-profits (EJ), other national stakeholders such as financial institutions, development organizations, and governmental agencies including environmental and health officials (G), industry (I), and academia (A).

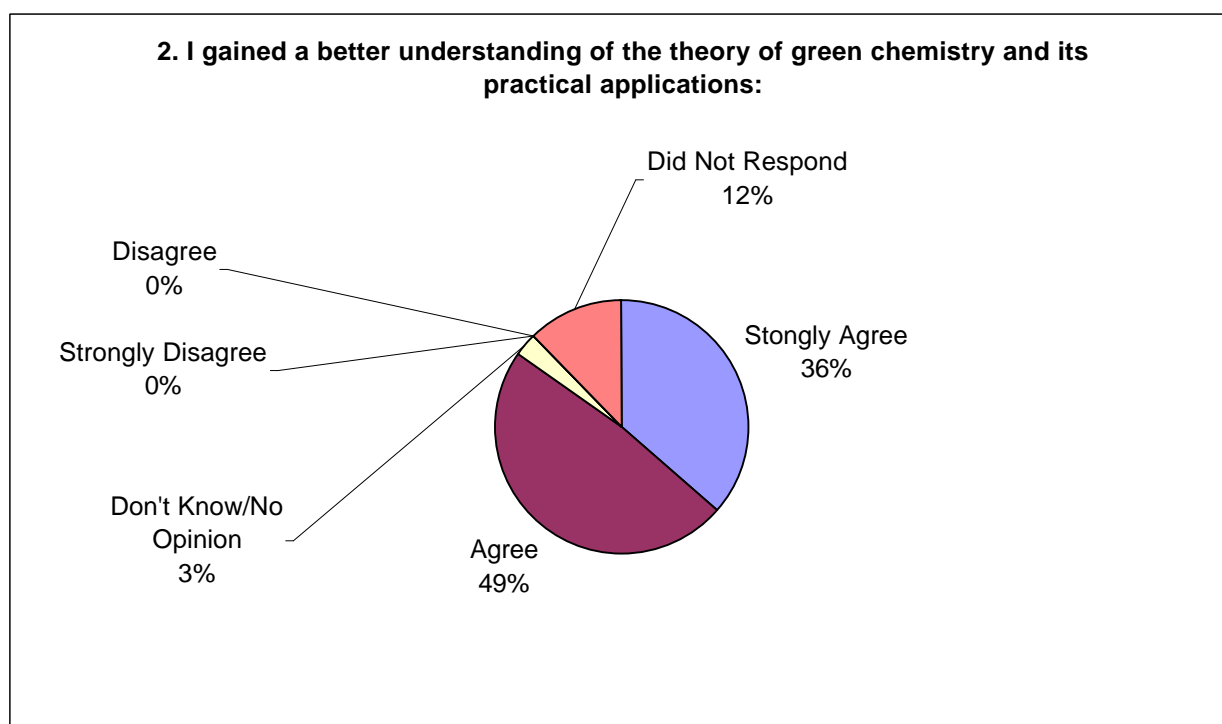


## DATA FROM ATTENDEE EVALUATIONS

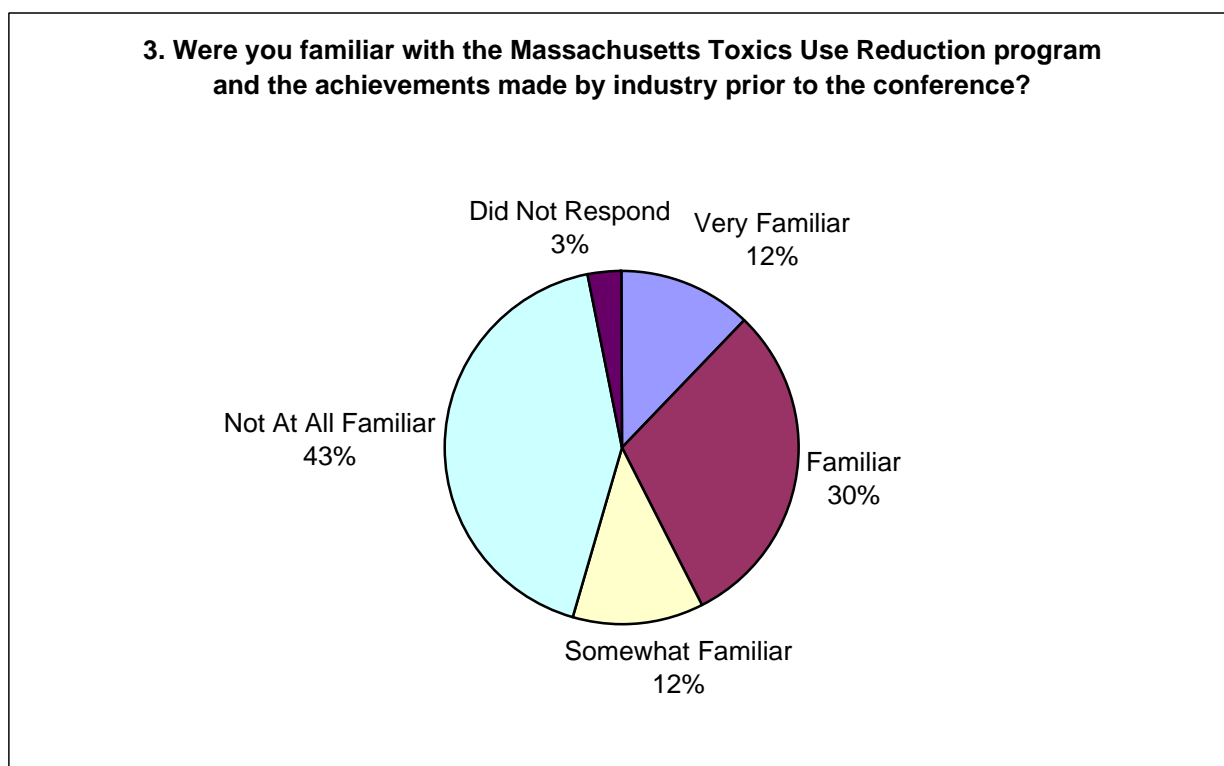
*There was a very positive response to the conference with 94% of attendees finding it interesting and useful:*



*85% of attendees gained a better understanding of green chemistry and how to apply it:*

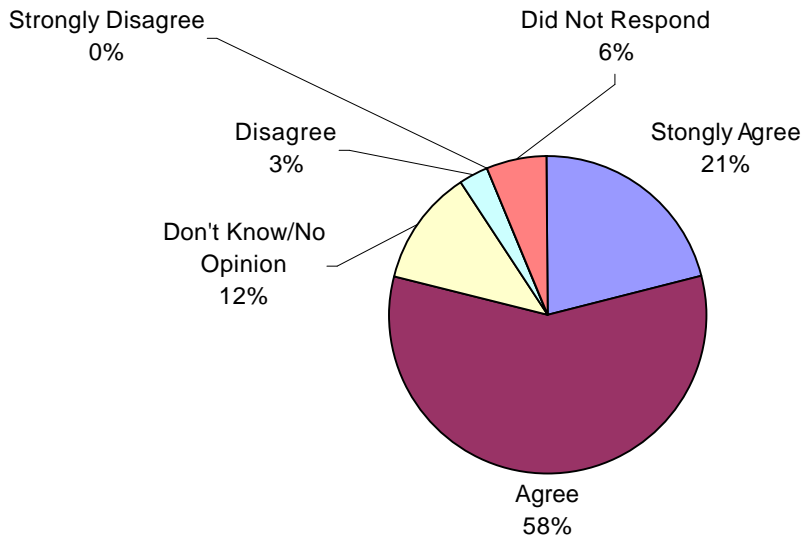


***Only 42% of attendees considered themselves to be familiar or somewhat familiar with the MA Toxic Use Reduction Program and the achievements made by industry prior to the conference:***



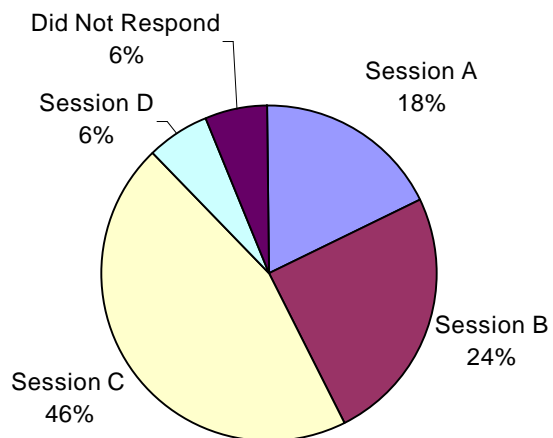
***The technology exhibits gave a better understanding about clean manufacturing to at least 79% of attendees:***

**4. The technology exhibit helped me better understand clean manufacturing:**

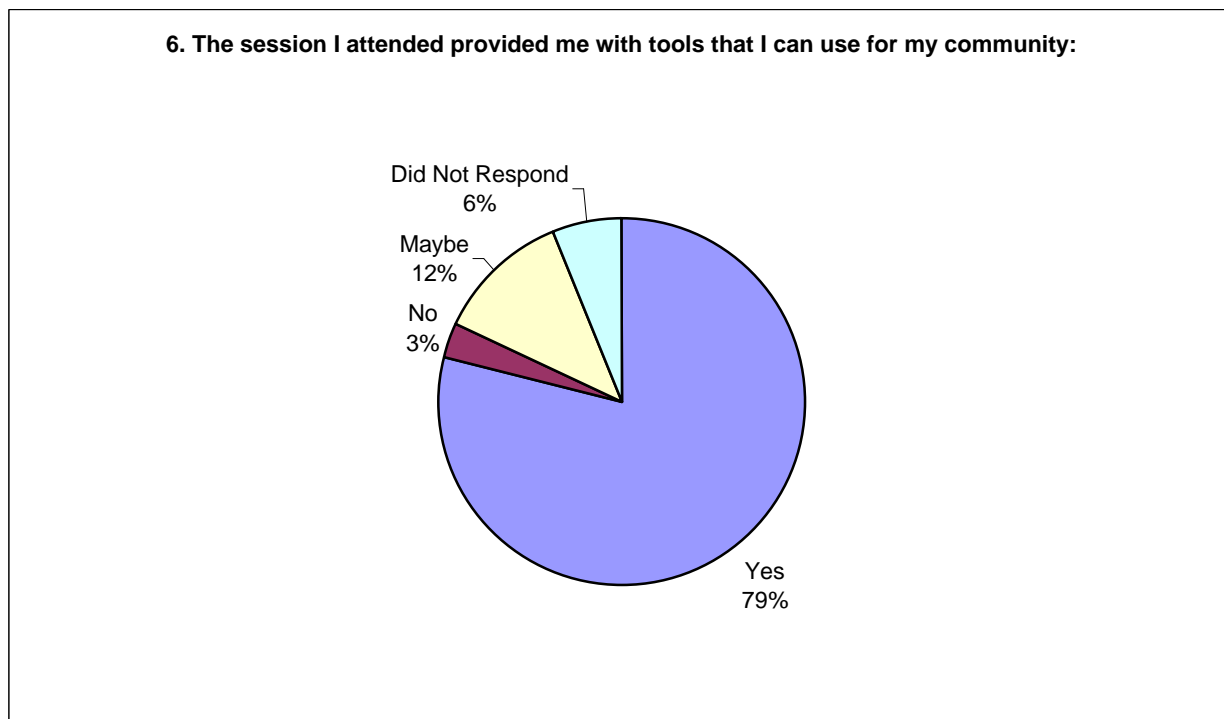


*There was a large discrepancy in the number of people who attended each of the 4 afternoon workshop sessions. The most popular, with 46% of attendees was Session C: Which technology is right for me? Effectively advocate its use in your community. 24% of attendees went to Session B: Where's the money? Grants, economic development packages, CRA and tax breaks. 18% of attendees went to Session A: Attracting green business using your local government; and only 6% of attendees went to Session D: Developing Partnerships with Business:*

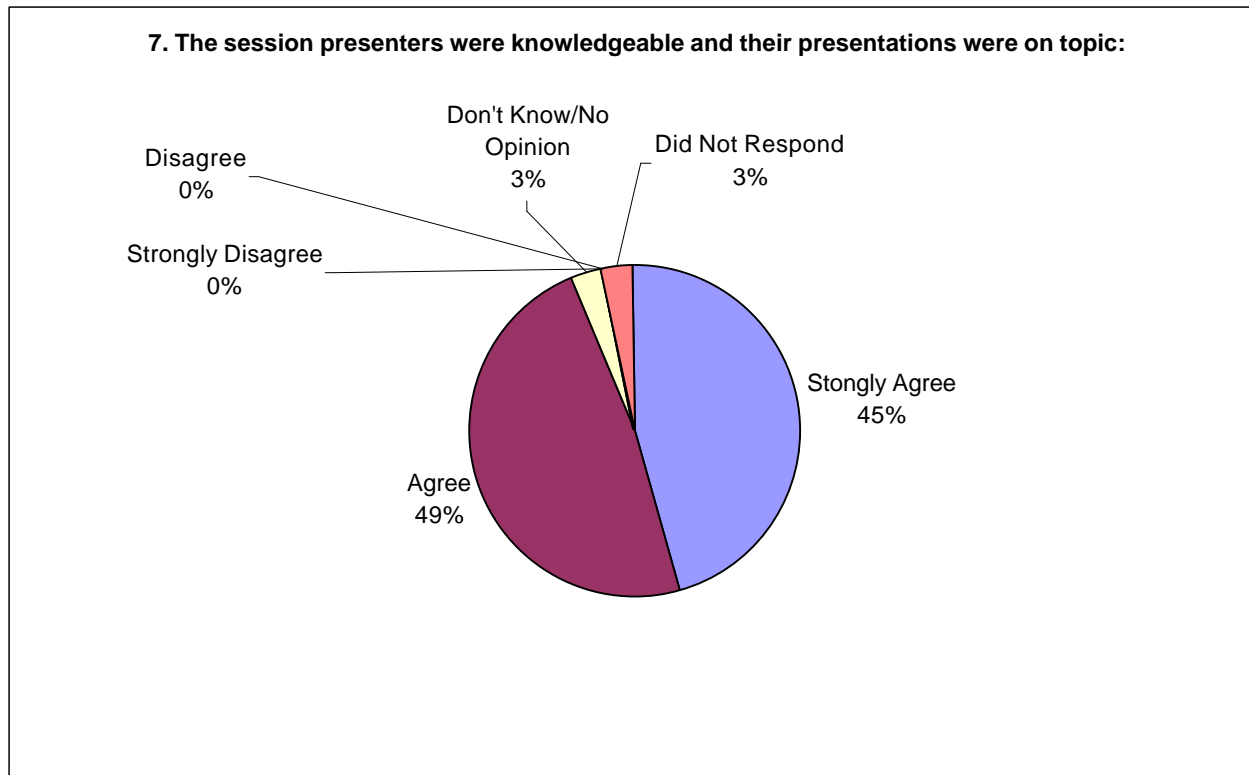
**5. Which session did you attend?**



*Of all attendees at the afternoon workshop sessions, 79% said the sessions provided them with the tools they could use in their community:*



*At least 94% of attendees said the session presenters were knowledgeable and on topic:*



*There were a variety of things people liked about the content of the sessions but most response came from Session C where attendees appreciated the practical and realistic situations presented:*



8. What did you like the most about the content of the session you attended at this conference?

**Session A:**

- Everything.
- Everything.
- The Devens presentation.
- The focus on city planning and how I, as a citizen can get involved.

**Session B:**

- It provided insights in funding opportunities available.
- All sessions were good. Need more handouts of all sessions.
- Good breadth of info.
- Usefulness of topic, good speakers!
- The options out there for people.
- The session touched on topics I would not have thought of without the question and answer portion of the session.

**Session C:**

- It is relevant to my work in green chemistry and environmental engineering.
- The discussion. The speakers encouraged discussion and questions. The speakers were good and practical oriented.
- Relation between the academic world and the real world.
- Made issues critical to change – i.e. partnerships and green manufacturing practices. More accessible and understandable to general audience.
- Great speakers.
- I liked the discussion about what we as individuals can do for EJ.
- The discussion of how the technologies can be used in real world situations.
- The significance and importance of understanding green chemistry.
- The passion of the presenters for their topics.
- Amy Cannon's presentation.
- I liked talking to people at tables. Would have liked more technical information.
- Jeremy Guay's laser spray gun demonstration was incredible.
- The intergroup discussion.

**Session D:**

- Attention to detail.
- Tremendous cooperation of speakers when asked questions.

*The things that were liked least about the sessions were that they were on at the same time meaning you could only attend one session.*

9. What did you like the least about the content of the session you attended at this conference?

**Session A:**

- None.
- Too long-winded.
- Nothing.
- Nothing.

**Session B:**

- The short speech format didn't allow all the "bases" to be covered in depth.
- None.
- I would like to see multiple sessions, not just 1.
- There's never enough time.
- Should have had session at different times. Have program during the week, 8-5.

**Session C:**

- No handout.
- It would be nice to focus ever more on a whole list of green technology that we can advocate to use in our community.
- Not many practical tools for use in the community.
- Some of the content was repeated from earlier in the day.
- Nothing.
- More facts, more statistics, more real life examples.
- Too much input from a few select audience members, but all in all I liked the involvement of the audiences.
- Workshop was too long.
- Nothing.
- Lack of stretch break.

**Session D:**

- No direct customers/prospect in attendance.

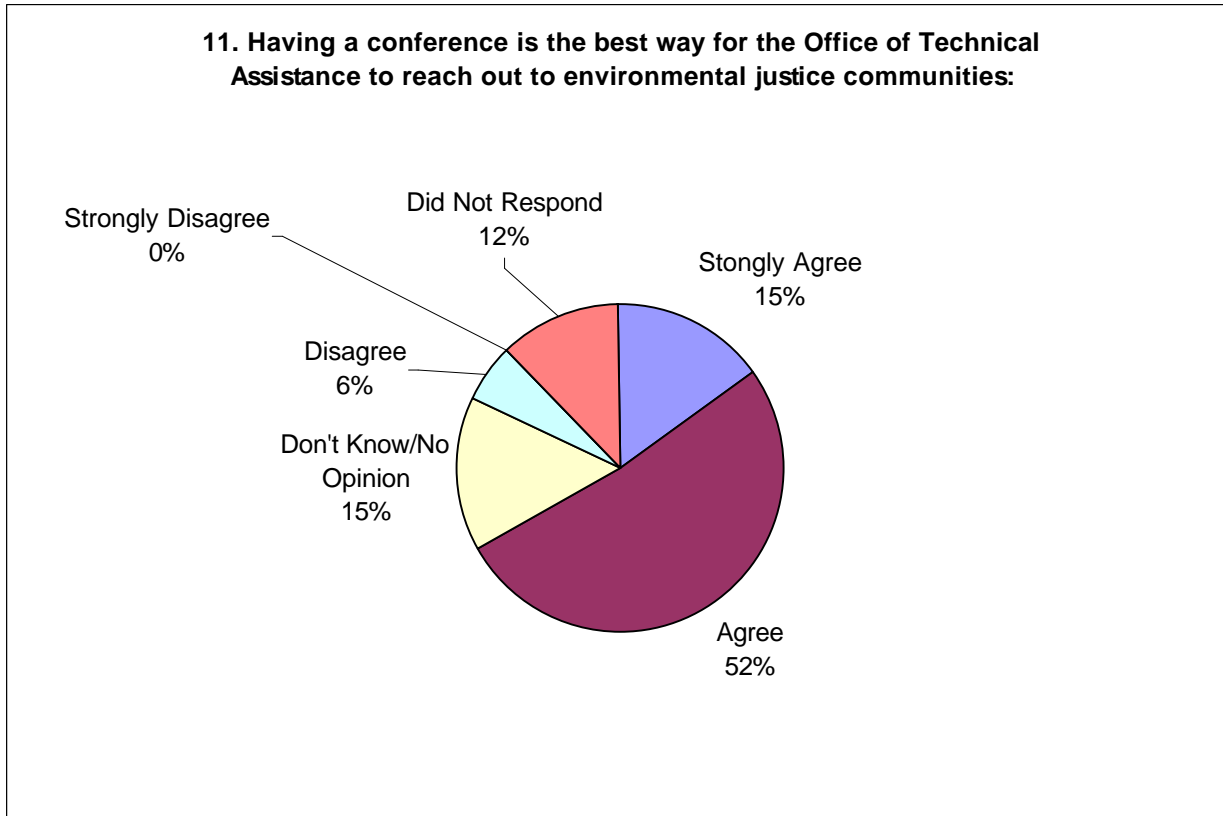
*Suggestions for conference follow up were very varied. These included more outreach, more conferences, more exhibits, more detailed workshop session follow ups, an action plan, a resource guide and reaching a wider community. The most common suggestion was the use of an e-mail list as a way to stay connected to others in EJ work and generally help each other by sharing information and resources:*

10. What would you like to see as a follow up to the conference? What suggestions do you have to move forward from here?

- There are a lot more people out there who ought to come to a conference like this. We need further education of both the community and the decision makers.
- Do this again. Compress 1<sup>st</sup> half of the day. Shorten sessions.
- More conferences.
- More conferences.
- I would like to see a more detailed follow up on each of the workshop sessions, as they were or could have been useful to our business. One component of the conference I was surprised to see missing from the conference was a detailed action plan on how to encourage businesses to move towards clean jobs and environmental justice. Many of the speakers touched lightly on the topic, but more information would've been helpful. Overall, I enjoyed the conference and look forward to attending a similar conference sponsored by OTA if held in the future. I'm particularly interested in learning about Dr. Warner's progress in green chemistry once a few years has gone by. Finally, the networking opportunity the conference afforded was invaluable. Without the development of such conference, it would have taken me several months to make the contacts I made in one day of the OTA conference.
- I would like to see a more comprehensive "laundry" list of funding options.
- Have it in Dorchester!
- Eco development of area surrounding Blackstone river area in Quinsigamond Village – jobs, green development, recreation.
- Create e-mail list with monthly letters with relevant information and links.
- Action on recommendations made today – info via e-mail on any follow-up.
- Maybe e-mail updates on green technology and how it can help EJ.
- More discussion on how to get this message to the wider community.
- Do it again! With more demonstrations of alternatives.
- I would like to see the conference become an annual event.
- Community outreach, lists of resources, websites, phone numbers, etc...
- An e-mail list for updates.

- Invite more prospects to the vendors that are supporting the conference.
- Yes – more on laser touch.
- Added or longer conferences, more down time to network.

**67% of attendees agreed that having a conference is the best way for the OTA to reach out to environmental justice communities:**



Comments on alternative approaches:

- Going to the EJ communities/organizations would be useful also.
- Should head out to municipal officials and community groups in more direct ways.
- To involve EJ populations, have workshops in each community with concurrent translations, presentations with illustrations, and discussion time.
- I think to reach out to EJ communities you must go into the communities and heavily recruit.
- Its good – should also reach out to companies so they can learn that there's a better way.
- Pull more people from the community in.
- I think it is a good way – but wonder how the conference was marketed. For example – was it promoted at Mayor's meetings/offices, was the agenda faxed over to city hall? Etc.
- Needed more publicity.

***The list of number one environmental problems in attendees' communities was very varied. No one problem stood out:***

12. Please identify the number one environmental problem in your community.

- Just one? Zoning, watershed, parking lot runoff, etc.
- Contamination and trash/garbage pollution.
- Contamination and trash/garbage pollution.
- Abandoned or underdeveloped mills...
- Brownfields. Suburban sprawl with declined urban core.
- Asthma
- Clean up Blackstone River, re-cap and development of greenwood street landfill.
- Water in Charles River is unsuitable for swimming.
- Lack of public awareness.
- Don't get me started. (Probably ignorance) as well as a long history of injustice.
- Use of green products and lack of environmental enterprise.
- Medford, MA – non-green consumption, contribution to carbon dioxide output, etc.
- Not in my community but personally: oil dependence.
- Improper management of waste.
- Lack of education or educational resources with in the community.
- Conscience and awareness (and compassion) for environmental issues.
- Lack of education.
- There are a number of problems, but I am interested in studying water treatment.
- Over reliance on cars.
- Ignorance.
- Water quality.
- Waste.
- Greenwood street landfill.

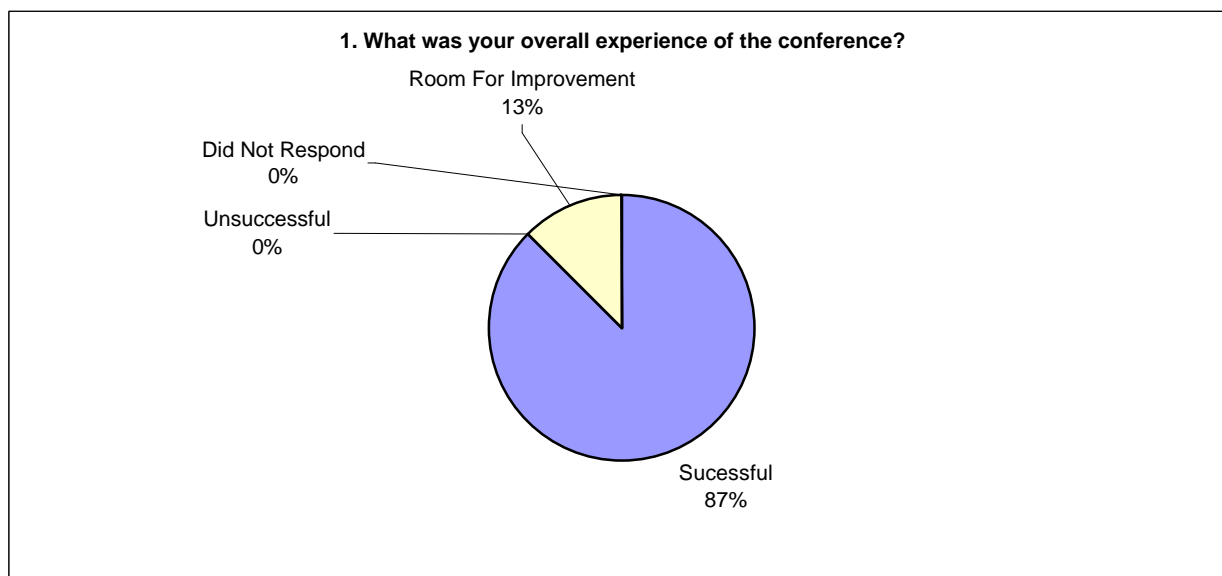
*Additional comments also varied but ideas in addition to ones already mentioned included an interest in the exhibits – having them staffed and having more of them:*

### 13. Additional comments?

- Thank you very much for the bus ride here. I couldn't have come otherwise, and I learned more than I expected.
- Congratulations, thanks for inviting me.
- The workshop sessions were concurrent and I would've liked to attend all of the sessions. Perhaps if each session were instead a separate conference from the others, all my questions would have been answered.
- Because I did not attend for my community but rather to get a better idea of what communities are doing, I would have liked more demonstrations of effective redevelopment in EJ communities.
- The technology tables were not staffed.
- I'd be interested in speaking or exhibiting next time.
- Need to entice manufacturers to come to an event like this.
- Good job.
- Great venue and structured well.
- Sound equipment not loud enough at start; go slower where detailed; need websites.

## **DATA FROM PPRESENTER EVALUATIONS FORMS**

*The overall experience for presenters - 87% of them thought the conference was successful:*



Additional comments:

- The professionalism, knowledge, and experience of the panelists and moderator with whom I participated were excellent. While we all talked about financial programs geared towards community improvement and economic development projects, we were a bit “all over the map” with what each of us spoke about – perhaps it was too broad / diffuse a message.
- Only attended the session I presented at.

***Presenters liked the diversity of attendees, the new group, the seriousness of attendees, the level of detail:***

2. What did you like the most about the conference?

- Diversity of people in attendance.
- Bringing a new group of people together.
- The break out session we were in (green technology) was great. I thought the questions were fantastic and the amount of discussion was incredible. I think the informal manner of the session made it easy for people to ask questions to stimulate discussion. I myself got a lot out of it and it was pleasantly surprised by the session.
- A.) Location; B.) Level of seriousness and interest of conference participants.
- I enjoyed listening to the other panelists in my session.
- The linking of these two important issues.
- Many different disciplines were discussed, and there was a lot of detail involved with each presentation.
- Only attended the session I presented at.

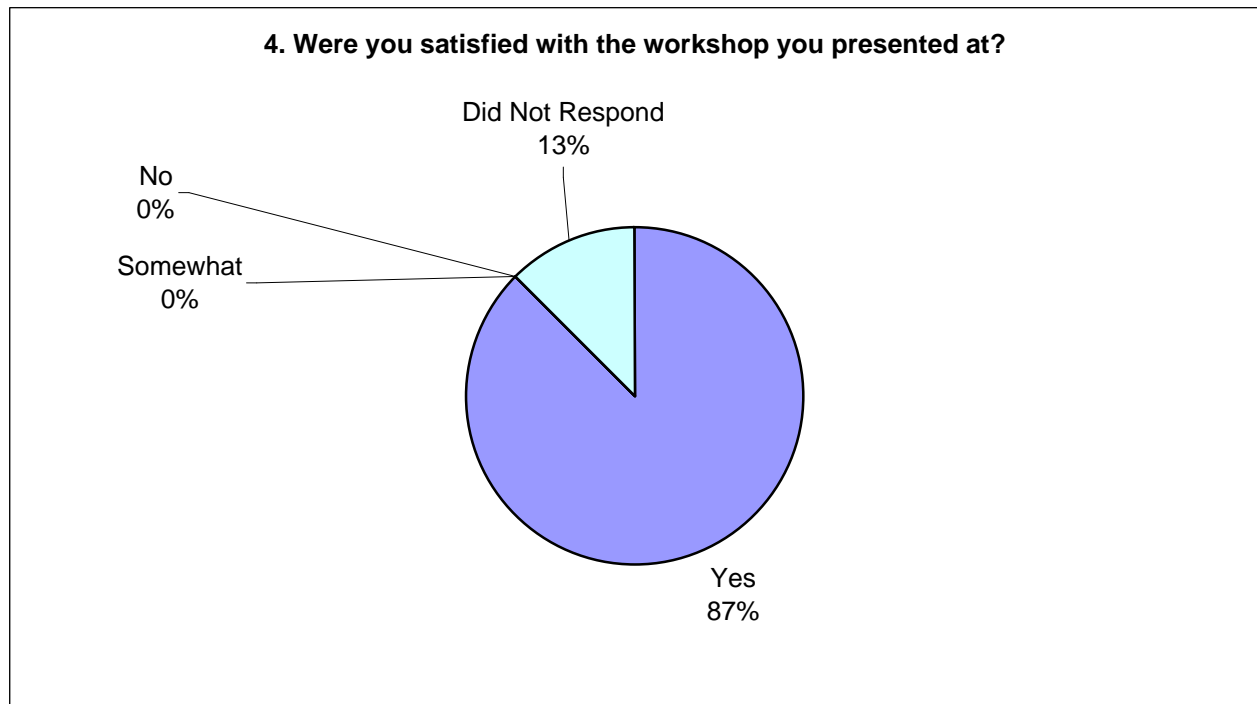
***What presenters liked the least about the conference was that there were too many workshop sessions and that the sessions could have had more focus:***

3. What did you like the least about the conference?

- Too many breakout sessions to choose from.

- There was not really anything that I did not like about the conference. I thought it went great.
- The themes of environmental justice and green manufacturing can often be reciprocal, but can also be mutually exclusive. It was a bit difficult to develop a focused message to an audience that had a wide diversity of interests and perspectives.
- N/A.
- Nothing.

**87% of presenters were satisfied with the workshop they presented at, and 13% did not respond to this question:**



Additional comments:

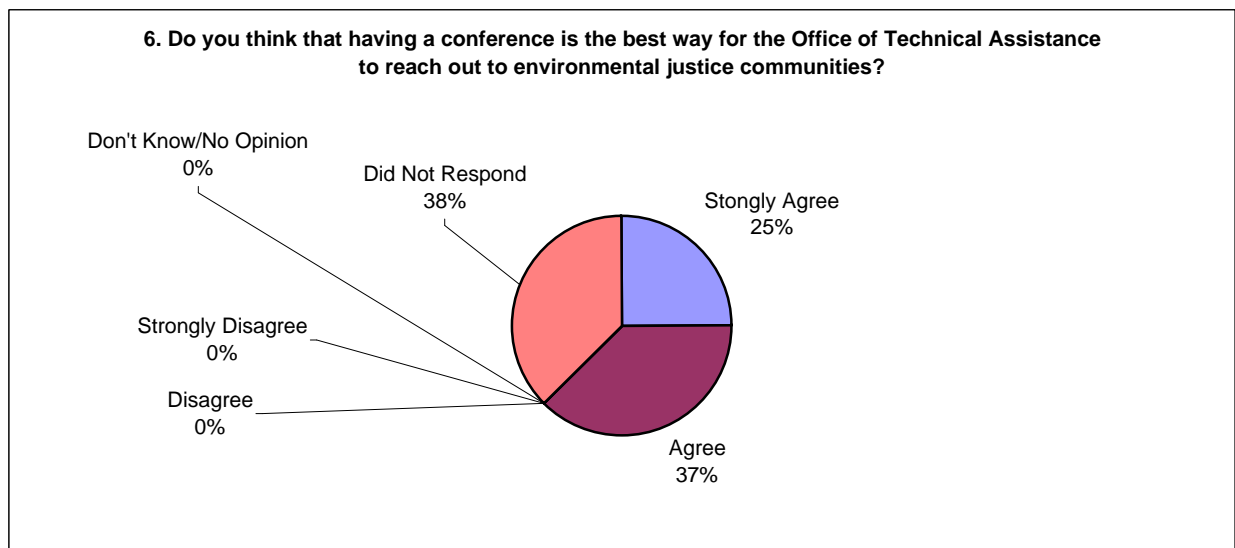
- One idea to consider is to use a (fictitious scenario) case study that each panel member could comment upon, providing perspective, advice, opinions, etc. on the financial issues inherent in the case study fact pattern?
- There were only 12 attendees. It would have been nice to have a larger group. Perhaps future conferences could have fewer concurrent sessions so the sessions could have more participants.

***Follow up ideas to the conference included selecting organizations that could benefit from technical assistance, targeting specific community groups, a follow up conference and e-mail list:***

5. What would you like to see as a follow up to the conference? What suggestions do you have to move forward from here?

- Select one or two organizations that could benefit from technical assistance or consulting – Nuestras Raices, for example.
- Plans for meetings targeting specific community groups.
- Perhaps a follow up conference in a year or so, inviting the same participants of the conference and we can then talk about what we have been doing since this conference to see what has come. That way we can expand the group as well. A mailing list with the participants might be a good way to go as well. If there is an e-mail list that each person could post e-mails to the group; that would help to make further connections.
- A “tighter” message / theme would perhaps have a more forceful impact / impression on participants and attendees for future conferences.
- As a presenter, I would like to know how my presentation was received by the audience.

***62% of presenters thought a conference was the best way for the OTA to reach out to EJ communities (as opposed to 67% attendees). Alternative suggestions revolved around holding events in EJ communities including small workshops on specific topics, attending events organized by communities, and consulting:***



Comments on alternative approaches:

- I think the Office should use a blended approach. Conference, small workshops, consulting, etc.
- Perhaps having more specific OTA workshops with EJ groups, targeting a specific topic might be a good way to go. “Experts” in whatever topic area is being discussed can be invited and therefore the EJ group can come away with the workshop with new knowledge, contacts, etc. Perhaps contacting the EJ groups to find out what areas interest them the most might also help
- I see a conference as one way to reach out. An alternative approach would be for OTA to participate in meetings and events organized within these communities
- There did not seem to be many community people there, rather, more practitioners who work with the EJ community. How about events held right in inner city neighborhoods?

***Some presenters noticed that there were not many EJ community attendees and made additional comments about this:***

7. Additional comments?

- Great job.
- I thought that the conference was a great way to network and to see what others are doing to make industries "greener"; I did not have an opportunity to attend the full conference I participated in just this one workshop. I think it would be useful to have a series of conferences located in selected communities through out the State. I was impressed with the number of persons that attended in spite of the bad weather. I was not sure if there were a sufficient number of community persons in the workshop. The information presented was very useful especially that which focused on non-traditional funding sources. I think a useful component, which could be added in the future, should focus on opportunities for business development and job creation, which will provide sustainability in low income and EJ Communities. I commend the OTA and EJ Offices for having this workshop and hope we can work together on future endeavors.

## **EVALUATION CONCLUSIONS**

### **Meeting the Goals of the Conference**



1. Our first evaluation focused on conference attendance. Recall that in planning the conference, an audience of approximately 150 was sought, with 75% representing EJ and community groups, including public health organizations and other national non-profits, 15% representing other national stakeholders such as financial institutions, development organizations, and governmental agencies including environmental and health officials, 5% representing industry, and 5% from academia.

According to the registration list, the attendees of the conference totaled 82 people, 55% lower than was expected. The first graph, “Attendee Composition,” indicates 27% represented the environmental justice communities, etc. (EJ), 26% the governmental agencies, etc. (G), 4% industry (I), and 43% academia (A). The largest gap between planned and actual percentage existed in the under representation of EJ community groups: 27% out of an expected 75%. Academia was represented far more than expected at nearly an additional 40% of the target, making up almost half of the attendees. The governmental agencies category was also represented more than expected with an additional 10% of attendees. Industry was, in comparison, accurate with a 4% representation out of an expected 5%.

The large over and under representation of all but one group needs to be stated when drawing conclusions from the general evaluation forms that were disseminated. Given that the conference’s prime target population - the EJ and community group category - was considerably lower than expected, and members of academia were considerably higher than expected, the conference did not succeed in attracting the target audience it aimed for. It is with this caveat in mind that we assess how well the other goals of the conference were met.

2. As mentioned in the introduction, the conference was certainly unique in attempting to connect the previously distanced groups of cleaner production and environmental justice communities. How well was the connection made? In terms of the first listed goal of informing the EJ populations of the wealth of green manufacturing opportunities available and demonstrating that cleaner production practices do exist and can work for them, the conference was useful and beneficial to 94% of the attendees, with 85% gaining a better understanding of green chemistry and how to apply it. Part of the learning process was facilitated through the technology exhibits with 79% of the attendees agreeing that the exhibits helped explain cleaner manufacturing to them.

The four workshop sessions were also instrumental in providing information. In responding to what attendees liked most about the content of their particular session, one person wrote it was “[the session’s] relevance to my work in green chemistry and environmental engineering.” Another wrote it was “the [discussion of] options out there for people.” Still another wrote it was the manner in which the session “made issues critical to change – i.e. partnerships and green manufacturing practices – more accessible and understandable to the general audience.”

Responses on the presenter evaluation forms also describe the conference as informative with 87% of presenters indicating the conference was successful. One presenter wrote, “I thought that the conference was a great way to network and to see what others are doing to make industries ‘greener’ ...” Here is how one presenter responded to the same question posed to the attendees about what was most enjoyable about the event: “The break out session we were in was great. I thought the questions were fantastic and the amount of discussion was incredible. I think the informal manner of the session made it easy for people to ask questions to stimulate discussion. I myself got a lot out of it and was pleasantly surprised by the session.” Taken altogether, it is accurate to say that the conference succeeded in increasing understanding of cleaner production and opportunities available to EJ populations.

3. In tandem with presenting examples and benefits, the conference aimed to connect EJ populations with strategies for cleaning up existing manufacturing, as well as providing tools for attracting cleaner production. The data suggests that this goal was met, with 79% of the attendees saying that the session they went to provided them with tools they can use for their community. Returning to the question of what attendees liked most about the sessions, some comments also support this figure: “It provided insights in funding opportunities available”; “I liked the discussion about what we as individuals can do for EJ”; “I

liked the discussion of how technologies can be used in real world situations.” Therefore, the conference as a whole provided meaningful resources for EJ groups to work toward cleaner production as a means to positive community redevelopment.

4. The last stated goal of the conference was similar to the first apropos the establishment of connections but encompassed the idea of helping the cleaner production industry become more familiar with the bottom line for EJ populations: to live in healthy, economically and environmentally sustainable communities. Unfortunately, there were no questions on the evaluation that directly assessed this goal. It did, however, receive some attention in the open-ended questions. One presenter wrote that the best element of the conference was that it “[brought] a new group of people together.” Other statements included, “Need to entice manufacturers to come to an event like this”; “No direct customers/prospect in attendance.” We therefore concluded that it was not possible from the data to assert whether a dialog between industry and EJ populations was established at the conference.

The difficulty in assessing the final goal demonstrates the difficulty in evaluating the conference by assessing the attainment of goals - as they were drafted by the planning board - through a process of matching the positive and negative opinions of people who experienced the event in ways perhaps not considered beforehand or thought of in the same manner.

The next section addresses these potential gaps by examining both reflections made by attendees and presenters on the process and structure of the conference as well as suggestions for developing the relationship between cleaner production industry and EJ communities in an on-going way.

### **The Conference as a Device**

The conference was geared explicitly for connecting cleaner production and environmental justice groups, an event that had not been previously attempted. The Office of Technical Assistance was therefore interested in finding out from participants whether they thought the conference was effective in this regard. When asked if they thought having a conference was the best way for the OTA to reach out to environmental justice communities, both attendees and presenters responded affirmatively: 67% and 62% respectively. While this represents well over half the audience, there were many suggestions on ways the conference could be improved.

- A frequent comment was that the conference needed to be better attended by both EJ populations as well as industry: “Pull more people from the community in”; “There did not seem to be many community people there, rather, more participants who work with the EJ community ... ”; “I was not sure if there was a sufficient number of community persons in the workshop”; “ ... [the conference should also have reached] out to companies so they can learn that there’s a better way [to operate in communities].”

Outreach to EJ communities was largely based on databases from the EJ program of EOEA. One of the interns working for EOEA over the summer coordinated this effort. However, it was assumed that the contact people in these EJ communities would provide the necessary publicity for the event to their respective community groups. As the outreach team only had e-mail and phone contact once or twice it was difficult to assess if the outreach within the specific communities took place. We concluded that there needs to be more effective outreach tools generated for any future events.

- Another reason that may have contributed to a less than expected turnout from EJ groups was that the free buses to the conference had to leave between 6:00AM and 6:30AM to arrive in Worcester on time. Although the conference location was chosen for centrality, Western Massachusetts EJ groups did not have buses provided for them to attend. Boston would have been a more central location.
- Industry participants nearly equaled their expected attendance of 5% representation. Therefore responses that suggest they were not in attendance may have been attributed to a lack of introductions in the workshop sessions. Perhaps adding a networking component to each session would be useful in connecting

the two groups. We also suggest targeting more than 5% representation from industry at future events as a way for EJ communities to become more familiar with green production options.

- Another suggestion was that people would have liked to attend more workshop sessions. One possibility would be that the number of sessions be decreased and made shorter so that attendees would have the opportunity to visit all those they were interested in. This would also address the imbalance in attendance at the sessions. Alternatively, there could be materials made available to attendees for sessions they were unable to attend.
- There were some comments about a lack of focus in the workshop sessions. In Session D, the chairperson directed the speakers to address 4 different questions, which kept the session very focused. It is therefore a suggestion that future workshops follow a similar format
- Another suggestion for the conference was to have more technology exhibits and to have the exhibit tables staffed. The exhibits were seen as the way attendees could “touch” and “feel” cleaner production practices and as such, were a very important tool. Being able to ask questions and interact with people knowledgeable in the specific technologies is invaluable.

### **Alternatives and Additions to Conferences**

Both attendees and presenters suggested that different tools could be used in developing the ongoing dialog between EJ communities and cleaner production industry. The following suggestions incorporate these ideas:

#### *Engaging EJ Communities Directly*

There were different suggestions about forums, workshops, exhibits and meetings being held directly in EJ communities, engaging EJ communities to discover what they would be most interested in finding out with regard to cleaner production industry. What is most important or interesting to each community may differ but it would be more target-oriented. Some may benefit from direct consultation. Some communities may benefit from meeting directly with cleaner production industry. Others may want an introduction to what cleaner production could mean for them pragmatically and how they could clean up existing industry. This individualized community approach could target specific issues much more quickly. It could also include going to events on EJ issues organized by the EJ communities themselves.

#### *E-mail Lists / List Serve*

A significant number of attendees suggested an e-mail list / list serve. They wanted to communicate with others in the field and to share ideas, resources, news, events etc. Some comments included: “Create e-mail list with monthly letters with relevant information and links;” “Send info via e-mail on any follow-up;” “Maybe e-mail updates on green technology and how it can help EJ;” “An e-mail list for updates.” More information and “laundry lists” of resources – such as those asked for by attendees at the conference and in the evaluations - could be easily disseminated in this way.

#### *Action Plan / Step by Step Guides*

Another set of practical tools called for in response to the conference were action plans for connecting EJ groups with cleaner production through the use of a step-by-step guide. One person commented: “I was surprised to see missing from the conference, a detailed action plan on how to encourage businesses to move towards clean jobs and environmental justice.”

Upon reflection, we thought this was an excellent idea both for EJ communities and for businesses. Although the action plans would likely be different for each, we thought they might include the four subject areas covered in the workshop sessions. Below is a barebones sketch of what a plan, as we envision it, might include:

#### **EJ Community Action Plan**

- As Session C was the most popular session, we thought the EJ Community action plan could start here. Which technology is right for me? It would include green technology suggestions based on sets of community

characteristics (i.e. types of manufacturing in the community). It would provide websites, local government information, industry information, books, and contacts to aid research.

- Where's the money? It would include suggestions of where to find grant money, resources for developing proposals, etc. It would provide relevant websites, local government information, industry information, books and contacts.
- Attracting green business using your local government. It would include lists of possible tax incentive programs available at state and federal levels as well as websites, local government information, industry information, books and contacts.
- Developing Partnerships with Business. It would include case studies of successful approaches to building meaningful and sustainable relationships as well as websites, local government information, industry information, books and contacts.

#### Business Action Plan

- Which community is right for me? How do I find out about communities? Provide resources.
- Local government laws / ordinances. What are restrictions / benefits for businesses to develop industry in EJ communities? Provide resources.
- Where do I find the money to develop a business in EJ communities? Is there specific moneys / funds made available for this? Provide resources.
- Developing Partnerships with Business. Provide websites, local government information, EJ community information, books and contacts.

Designing and disseminating the action plans could be a collaborative effort between the OTA and EJP, EJ community groups, and businesses that draws on existing resources. A good basis for these plans and guides would be case studies in which connections between EJ communities and cleaner production have been successfully made, the local knowledge of EJ populations, the OTA's years of experience working with the business sector, and the EJP's numerous associations with community members.

### **SUMMARY**

Based on an evaluation of the data taken from attendees and presenters at the conference, the conference was a success. It broke new ground in building a bridge between EJ communities and cleaner production practices. Not only did the conference increase the understanding of cleaner production practices and the opportunities available to EJ communities, it also provided resources to realize those opportunities and move toward healthier, more sustainable communities.

It is important to remember that this data came from an unexpected attendance demographic - a large under representation of EJ community representatives and a large over representation of academia and government representatives. The only conclusions that can be drawn from this is that better tools need to be devised to attract EJ communities to engage in establishing connections with cleaner production.

It appears that the conference was an effective tool for disseminating knowledge and that it can be improved upon to enhance its capability as a device to help facilitate networking. In addition to using conferences, we suggest looking at alternative outreach tools, some specifically geared to communities themselves. Suggestions include engaging and working with individual EJ communities directly on issues relevant to their community, establishing e-mail lists and list serves for communicating resources, and developing action plans with step-by-step guides for both communities and businesses.

### **APPENDIX A**

#### **Agenda**

- 8:00 Registration and Continental Breakfast**
- 9:00 Welcome and Introductions**  
*James Stergios, Undersecretary for Policy, Executive Office of Environmental Affairs*
- 9:10 Develop Community Awareness of Green Chemistry**  
*John Warner, PhD., Professor, University of Massachusetts-Lowell*
- 9:40 Benefits of Toxic Use Reduction Approaches**  
*Ken Geiser, PhD., Professor, University of Massachusetts-Lowell*
- 10:10 Break**
- 10:25 What is Green Technology?**  
*Paul Richard, Director, Office of Technical Assistance*
- 10:40 Technology Exhibit: See Clean Manufacturing Up Front**
- 11:30 Worcester - A Local Story**  
*Michael V. O'Brien, City Manager of Worcester, MA*
- 12:00 Lunch & Networking**
- 1:00 Workshop Sessions:**
- Session A: Attracting Green Businesses Using Your Local Government**  
*Chair: Katie Stebbins, Sr. Env. Planner, City of Springfield*  
*Speakers: Sara James, President, Sarah James & Associates*  
*Sally Edwards, Consultant to the Devens Enterprise Commission*
- Session B: Where's the Money? Grants, Economic Development Packages, CRA, & Tax Breaks**  
*Chair: Stephen Adams, President & CEO, Pioneer Institute*  
*Speakers: Daniel McManus, Investment Banking Division of MassDevelopment*  
*Robert Baker, President, Smaller Business Association of New England*  
*Edward Connelly, President, New Ecology, Inc.*
- Session C: Which Green Technology is Right for Me? Effectively Advocate Its Use In Your Community**  
*Chair: John Warner, Ph.D., Professor, UMass – Lowell*  
*Speakers: Terri Collins, Ph.D., Professor, Carnegie Mellon University*  
*Ken Geiser, Professor, UMass-Lowell*  
*Amy Cannon, Center for Green Chemistry, UMass-Boston*  
*Jeremy Guay, Auto Body Instructor, Bay Path Regional VoTech High School*
- Session D: Developing Partnerships with Business**  
*Chair: Daniel Ross, Executive Director, Nuestras Raices*  
*Speakers: Alvaro Lima, Sr. Vice President, Initiative for a Competitive Inner City*  
*Joel Schwartz, Deputy Director, Dorchester Bay Economic Development Corporation*  
*Glynn Lloyd, Founder and CEO, City Fresh Foods*
- 3:00 Wrap Up and Next Steps**

## **APPENDIX B**

Thank you for taking the time to provide feedback on this meeting. Your comments will help improve future meetings.

**1. Overall, the conference was interesting and useful to me. (circle one)**

Strongly agree      Agree      Don't Know/No Opinion      Disagree      Strongly disagree

**2. I gained a better understanding of the theory of green chemistry and its practical applications.**

Strongly agree      Agree      Don't Know/No Opinion      Disagree      Strongly disagree

**3. Were you familiar with the Massachusetts Toxics Use Reduction program and the achievements made by industry prior to the conference?**

Very Familiar      Familiar      Somewhat Familiar      Not at all familiar

**4. The technology exhibit helped me better understand clean manufacturing.**

Strongly agree      Agree      Don't Know/No Opinion      Disagree      Strongly disagree

**5. Which session did you attend?**

- ☐ Session A: Attracting Green Business Using Your Local Government
- ☐ Session B: Where's the Money? Grants, Economic Development Packages, CRA, and Tax Breaks
- ☐ Session C: Which Green Technology is Right for Me? Effectively Advocate Its Use In Your Community
- ☐ Session D: Developing Partnership with Business

**6. The session I attended provided me with tools that I can use for my community.**

Yes      No

**7. The session presenters were knowledgeable and their presentations were on topic.**

Strongly agree      Agree      Don't Know/No Opinion      Disagree      Strongly disagree

**8. What did you like the most about the content of the session you attended at this conference?**

**9. What did you like the least about the content of the session you attended at this conference?**

**10. What would you like to see as a follow up to the conference? What suggestions do you have to move forward from here? (use back of form if necessary)**

**11. Having a conference is the best way for the Office of Technical Assistance to reach out to environmental justice communities? If not, please suggest alternative approaches.**

Strongly agree      Agree      Don't Know/No Opinion      Disagree      Strongly disagree

**12. Please identify the number one environmental problem in your community.**

**13. Additional comments? (use back of form if necessary)**

**APPENDIX C**

## EVALUATION FORM FOR PRESENTERS

*Thank you for taking the time to provide feedback on the conference. It will be extremely helpful in writing an evaluation of the conference and in suggesting future steps for the Office of Technical Assistance and Environmental Justice Program.*

Your

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

Area of

work: \_\_\_\_\_

**2. What was your overall experience of the conference?**

Successful

Room for Improvement

Unsuccessful

Additional comments:

**3. What did you like the most about the conference?**

**4. What did you like the least about the conference?**

**5. Were you satisfied with the workshop you presented at?**

Yes

Somewhat

No

Additional comments:

**6. What would you like to see as a follow up to the conference? What suggestions do you have to move forward from here? *(use back of form if necessary)***

**7. Do you think that having a conference is the best way for the Office of Technical Assistance to reach out to environmental justice communities? If not, please suggest alternative approaches.**

Strongly agree

Agree

Don't Know/No Opinion

Disagree

Strongly disagree

**8. Additional comments? *(use back of form if necessary)***